

sequences of priority can be changed at the server 202 or even by the wireless device 200 through communications to the server 202, and other sequences and steps of sending by the server, all according to the data types and the specific queues 208 for those types, is possible based on the programming and settings.

5 Tokenization of HTML

Referring to FIG. 4, a tokenization server 400, for example, is included as the wireless ASP server computer 106. The tokenization server 400 serves to tokenize HTML or other code received or maintained at the tokenization server 400, for communication over the network, such as to the wireless device 200 over the Internet 102 including wireless channels. For purposes herein, the term “tokenization” refers to a process of representing larger amounts of data (such as sequences of commands or information) by a smaller data that identifies or is defined by the larger amount of data, the objective being to represent larger oft-recurring data sequences with smaller identifiers or terms for purposes of communications over networks. The tokenization server 400 receives information, such as over the Internet 102, from other devices connected to the Internet 102, for example, the server computer 104. The information received by the server 400 can be requested by the wireless device 200 or otherwise made available at the server 400 for delivery to the wireless device 200.

At the tokenization server 400, the information, such as an HTML page 402, is saved in a memory (not shown in detail), for example, RAM, cache or other memory. The HTML page 402 (or other information, as the case may be) is processed by the server 400 via a pre-processor 406. The pre-processor 406 is a software or hardware implemented manipulator of the HTML page 402, as hereinafter described more fully.

The pre-processor 406 includes, or alternately communicates with, a dictionary 404. The dictionary 404 is, for example, a relational database stored or accessible at the server 202 or some other listing associated with shortened or abbreviated terms. The dictionary 404 includes various HTML calls and sequences that are associated or related to other identifying data or terms. For example, certain HTML commands that may regularly occur in HTML or other served pages, such as the HTML page 402, can be represented by a more basic identifier or term, with the object being to limit the amount of data necessary to represent the commands. The pre-processor 406 reduces the HTML page 402 or other information to a tokenized HTML file 408 consisting of the reduced amount of data, including tokens, that represents the original HTML page 402 and its various commands and aspects.

The tokenized HTML file 408 is saved at the server 400. As appropriate for the server 400, for example, according to the previous descriptions of data type prioritization or otherwise, the tokenized HTML file 408 is communicated to the requesting device, i.e., the wireless device 200 in the embodiment. At the wireless device 200, the tokenized HTML file 408 is received and a separate dictionary (not shown) maintained at the wireless device 200 converts the tokenized HTML file 408 back to the original HTML page 402. The wireless device 200 can then handle the HTML page 402, in its full and original form, for example, by display at the wireless device 200 or other typical use for the particular type of information so communicated.

Referring to FIG. 5, a method 500 is performed by the tokenization server 400 of FIG. 4. In a step 502, the HTML page 402 (or other information, as the case may be) is received or otherwise available to the server 400. The server 400 next pre-processes the

HTML page 402 in a step 504, by relating tokenized identifiers from the dictionary 404 to the data of the HTML page 402 and saving the tokenized HTML file 408 with tokens replacing certain sequences. Various read and write steps of a step 506 are involved in the tokenization performed in the pre-processing step 504. The result of the step 504 is the tokenized HTML file 408 which is smaller in size than the HTML page 402. Alternatively, the tokenized HTML file 408 could provide some benefit other than size reduction to the HTML page 402, for example, the pre-processing step 504 could tokenize in a manner that yields tokenized files that make communications over the network more expedient or reliable notwithstanding the tokenized file size and other factors.

In a step 508, the tokenized HTML file 408 is communicated by the server 400 over the network, such as a wireless channel, to the wireless device 200. The communications by the server 400, and the sequence and operations thereof, are as previously described or otherwise as conventional.

In operation of the systems 100, 200, 400 and the methods 300, 500, numerous alternative business and technical arrangements are possible. Of course, the wireless ASP server computer 106 must be capable of communicating via typical network protocols with other network connected devices in order to receive and deliver messages from and to those network connected devices, and then transfer those messages on or receive those messages from the wireless device 200, as appropriate. Moreover, although only particular devices of a communications network and its nodes are herein described and discussed, particularly, primarily the wireless device 200 and the wireless ASP server computer 106, the wired device 240 and the network 100, such as the Internet, have been